

WHAT IS CLAIMED IS:

1. A parallel processes run scheduling method to be used in an information processing system comprising a plurality of processors on which a plurality of parallel programs, each consisting of the equal number of parallel processes, are run in a time-sharing-based multiplex manner, the method comprising:

the step of executing all allocated parallel processes on each processor in order as determined, according to the value of an integrating counter on each processor that increments over time in synchronization with all other processors and the number of the parallel programs to run concurrently in the system, thereby simultaneously executing the parallel processes of one of the parallel programs in turn on the processors.

2. A parallel processes run scheduling method to be used in an information processing system comprising a plurality of processors on which a plurality of parallel programs, each consisting of the discrete number of parallel processes, are run in a time-sharing-based multiplex manner, the method comprising:

the step of executing all allocated parallel processes on each processor in order as determined,

according to the value of an integrating counter on each processor that increments over time in synchronization with all other processors and the number of the parallel programs to run concurrently in the system, wherein, if the number of the parallel processes of a parallel program is less than the number of processors to be used for running the parallel program in the time-sharing-based multiplex manner, some of the processors to which no parallel process of the parallel program is allocated execute a dummy process allocated instead when the parallel program is executed, thereby simultaneously executing the parallel processes of one of the parallel programs in turn on the processors.

3. A parallel processes run scheduling device to be used in an information processing system comprising a plurality of processors on which a plurality of parallel programs, each consisting of the equal number of parallel processes, are run in a time-sharing-based multiplex manner, the device to be provided on each processor comprising:

an integrating count means, the count value of which increments over time in synchronization with all other processors;

a processes number count means to store the number of processes to run on the processor, corresponding to the number of parallel programs to run in the system;

a means for generating a queue of processes to execute;

a process queue buffer means for storing the generated process queue; and

a means for determining a process to execute that determine a process to execute out of the processes in the process queue, according to the count value of the integrating count means and the number of processes retained in the processes number count means.

4. A parallel processes run scheduling device to be used in an information processing system comprising a plurality of processors on which a plurality of parallel programs, each consisting of the discrete number of parallel processes, are run in a time-sharing-based multiplex manner, the device to be provided on each processor comprising:

an integrating count means, the count value of which increments over time in synchronization with all other processors;

a processes number count means to store the number of processes to run on the processor, corresponding to the number of parallel programs to run in the system;

a means for generating a queue of processes to execute, wherein, if the number of processes allocated to

the processor for executing them is less than the number of processes retained in the processes number count means, the means for generating a queue generates a queue of processes including as many dummy processes as required to fill up the difference in the number of processes of both; if the number of processes of both agrees, the means for generating a queue generates a queue of processes not including dummy processes;

a process queue buffer means for storing the generated process queue; and

a means for determining a process to execute that determine a process to execute out of the processes in the process queue, according to the count value of the integrating count means and the number of processes retained in the processes number count means.

5. A computer readable means having a parallel processes run scheduling program recorded thereon, comprising:

a procedure for counting and storing the number of processes to run on each processor, corresponding to the number of parallel programs specified to run in the system;

a procedure for generating and storing a queue of processes specified to be executed on each processor;

a procedure for determining a process to execute out of the processes in the process queue, according to the count

value of the integrating count means of the processor and the number of processes corresponding to the number of parallel programs.

6. A computer readable medium having a parallel processes run scheduling program recorded thereon, comprising:

a procedure for counting and storing the number of processes to run on each processor, corresponding to the number of parallel programs specified to run in the system;

a procedure for generating and storing a queue of processes, wherein, if the number of processes specified to be executed on each processor is less than the number of processes counted, a queue of processes including as many dummy processes as required to fill up the difference in the number of processes of both is generated; if the number of processes of both agrees, a queue of processes not including dummy processes is generated;

a procedure for determining a process to execute out of the processes in the process queue, according to the count value of the integrating count means of the processor and the number of processes corresponding to the number of parallel programs.